

## **WATERSHED LESSON #4:**

### ***Environmental, Economic, and Social Values are Compatible***

At the national conference Watershed '96 held in Baltimore, Jonathan Lash, from the President's Council on Sustainable Development, reported on his team's survey of communities across the nation and approaches they were taking to achieve sustainability. In many instances, his group found watershed management was the approach they were taking. In his remarks, John recognized the watershed work going on across the nation and encouraged more as a means to achieving sustainability. While definitions of 'sustainability' differ, it generally means viewing economic, environmental, and social values as complementary and interdependent and working to sustain all three over time (typically more than one generation).

Too often in the past, environmental and economic and social issues have polarized people, making it impossible to achieve a common vision of sustainability. For the watershed approach to become a reality, there must be widespread recognition in the community that people and nature can coexist within the watershed. This can pave the way for partnerships of diverse interests to form around a sustainable vision.

### ***Nashua River Watershed, Massachusetts***

#### ***Can Sustainability Be Achieved Through Management?***

The Nashua River Watershed Association (NRWA), in its long-range plan, *1995 to 2020 Vision for the Nashua River Watershed*, gives high priority to the need to "support resource-based economic activities, including sustainable farming, forestry and eco-tourism." Residents of the watershed recognize that protecting open space will provide positive economic returns. Through environmental education, resource-based community planning, and advocacy for resource stewardship, the NRWA attempts to achieve greater sustainability through cooperative management.

***utilize those individuals who know how to  
manage forests to help educate those who do not***

Some farming practices can have severe impacts on water quality by causing erosion, sedimentation, and fertilizer and pesticide runoff. Taking a sustainable approach, the NRWA suggests, means encouraging farmers to use integrated pest management and cost effective organic farming. An important goal of the plan is to seek the enlargement of greenway buffers along wetlands and other water bodies. To achieve this end, the NRWA's *2020 Plan* calls for a mix of new incentives to farmers and additional support from the State agricultural department, local conservation districts, and extension services.

According to the NRWA, the key to sustainable forests is the involvement of forest professionals: connecting those individuals who know how to manage forests to help educate landowners who want to learn. Currently, some property owners do not understand measures they could take to preserve high quality trees. Consultations with professional foresters will help fix that.

The NRWA also calls for the cooperation of local Chambers of Commerce, cultural groups, recreational enterprises, and other travel-related businesses to work together to foster “eco-tourism” in the Nashua River Watershed. Possible tour themes designed to attract visitors to the region include visits to “pick-your-own” apple orchards, farm stands, concerts, artisan studios, restaurants, and festivals. The tours would be small, utilizing vans rather than buses.

The NRWA developed the **2020 Plan** with extensive community input. Consensus was achieved around an overarching vision for the watershed that was so compelling the NRWA adopted it as its own mission statement in 1996: “a healthy ecosystem with clean water and open spaces for human and wildlife communities, where people work together to sustain mutual economic and environmental well-being.” Throughout all its work, the NRWA recognizes that economic, social, and environmental needs are compatible.

**For more information:** contact Robert Levite, 508-448-0299, 508-448-0941 (fax), [nrwa@ma.ultranet.com](mailto:nrwa@ma.ultranet.com)

## ***Blackstone River National Heritage Corridor Water Quality is the Key to Community Development***

The Blackstone River located in Massachusetts and Rhode Island is rich in historic and natural resources. The Blackstone Valley is noted as the “birthplace of the American Industrial Revolution.” In 1790, Samuel Slater established in the valley the first successful water-powered textile mill in America. As a result of this new technology, mills and industry flourished - dramatically transforming the American landscape. While industrialization of the Valley produced economic prosperity, there were adverse side effects. Over a century of industrial use has taken its toll on the Blackstone River, which had served as a disposal site for pollutants incidental to the textile, leather making, woodworking, and metal working industries. The result was an extremely polluted river, and as industry migrated south, the pollution issues remained.

***Many historic sites such as old textile mills,  
are being converted to schools, parks, and tourist sites***

In 1986, the region’s significance as an important part of America’s cultural heritage was recognized when Congress established the Blackstone River Valley National Heritage Corridor Commission. The Commission consists of federal, state, and local

representatives, as well as private citizens. The Commission's ability to leverage a relatively small federal investment with state and private funds has made it a model for conservation and economic development. Although the Commission owns no land, it is responsible for preserving and interpreting the significant stories and landscape features of the Blackstone Corridor.

The Commission invests in activities such as community and land use planning, heritage tourism, downtown revitalization, river restoration, recreation development along the river, interpretation, and environmental education. Many mill villages and communities throughout the river valley have realized the importance of working together. Many of the old mills have been retrofitted for a new century, supporting incubator businesses, residential businesses, residential housing, and retail outlets. Mill villages recognize the importance of maintaining their historic character while developing sustainable economies. And the river itself is now looked upon as an asset again. The Blackstone River Valley Explorer, a river classroom vessel has carried over 70,000 people on the river for tours and educational field trips.

Communities throughout the Heritage Corridor recognize that a clean river is critical to revitalization. In a major restoration effort, Federal and state agencies are working with communities and organizations to improve the environment along the riverway. Current planning efforts by the Commission, the U.S. Army Corps, EPA, and others will address issues related to environmental restoration needs: waste water treatment, toxic sedimentation, historic dams, reintroduction of anadromous fish, water quantity and flows, and wetland restoration and creation. The Commission understands the need to work at both a grand scale (that will take years and need major investments) as well as at the grassroots level. Most importantly, the river has once again become a focal for communities and businesses.

***For more information:*** contact Michael Creasey, National Park Service, Blackstone River Valley, National Heritage Corridor Commission, One Depot Square, Woonsocket, RI, 02895, 401-762-0250, michael\_creasey@nps.gov or A. Elizabeth Watson, 301-262-5064, 301-805-8959 (fax), watsonaew@aol.com

## ***Key Contacts and Resources***

### **GREEN DEVELOPMENT AND PLANNING**

- ***Green Development: Literature Summary and Benefits Associated with Alternative Development Approaches***, US EPA, EPA 841-B-97-001, September 1996. Contact: Jessica Cogan, 202-260-7154. Includes information on environmentally sensitive infrastructure program and projects, case studies on urbanizing suburbs, model ordinances and plans, and environmentally friendly transportation plans. Call 1-800-490-9198 for a copy.
- ***Sustainable Watershed Management at the Rapidly Growing Urban Fringe***, T. H. Cahill, J. McGuire, W. R. Horner, Cahill Associates, West Chester, PA, Dr. R. E. Heister,

Executive Director, Green Valleys Association, Birchrunville, PA, paper delivered at Watershed '96. <http://www.epa.gov/OWOW/watershed/Proceed/cahill.html>

#### LOCAL EXAMPLES OF AND GUIDES FOR SUSTAINABILITY

- ***Chesapeake Bay Communities: Making the Connection, A Catalog of Local Initiatives to Protect and Restore the Chesapeake Bay Watershed.*** US EPA Chesapeake Bay Program, EPA 903-R-95-108, April 1996, 1-800-YOUR-BAY. Describes local efforts to protect the Chesapeake Bay, many of which have sustainable development components, including Northampton County, VA's Coastal Program Special Area Management Plan for Sustainable Development, Sustainable Technologies Industrial Park, Prince William County, VA Watershed Management Program.
- ***Saving America's Countryside: A Guide to Rural Conservation,*** Samuel N. Stokes, A. Elizabeth Watson, and Shelley S. Mastran. Baltimore: Johns Hopkins University Press, 1997 (first published in 1989). Order by calling 1-800-537-JHUP (\$29.95 plus shipping and handling). Popular citizen's guide to rural resource planning and development issues with extensive bibliography. Uses case studies and covers economic development, rural issues, citizen organizing, resource inventories, planning basics, state and federal programs, and community education. Water quality, rivers, and watersheds are covered throughout and integrated with other planning issues.
- ***Watershed Progress: New York City Watershed Agreement,*** EPA 840-F-96-005, describes New York's approach to sustainable development to protect drinking water while saving money. Available for free by calling 1-800-490-9198 or on the web at <http://www.epa.gov/OWOW/watershed/ny/nycityfi.html>
- ***Sustainability through Restoration: Experiences of the White Mountain Apache Tribe,*** Jonathan Long, Watershed Planner, White Mountain Apache Tribe, White River, AZ, paper given at Watershed '96. <http://www.epa.gov/OWOW/watershed/Proceed/long.html>
- ***The NAPA River Watershed Owner's Manual: A Framework for Integrated Resource Management.*** 1994. NAPA County Resource Conservation District. Contact: Dennis Bowker, 1303 Jefferson Street, Suite 500B, NAPA, California, 94559, 707-252-4188, 707-252-4219 (fax), 102223.2012@compuserv.com
- ***Return to the Future: Watershed Planning-The Quest for a New Paradigm,*** Eugene Z. Stakhiv Policy and Special Studies Division, U.S. Army Corps of Engineers, Institute for Water Resources, Alexandria, VA, paper delivered at Watershed '96. <http://www.epa.gov/OWOW/watershed/Proceed/stakhiv.html>

#### ECOLOGICAL ECONOMICS

- ***Taking Nature Into Account,*** a nationally-publicized study that concluded the value of natural systems was nearly twice that of the combined value of the World's GDP (\$33 vs. 18 trillion). Conducted by International Society for Ecological Economics, P.O. Box 1589, Solomons, MD 20608, 410-326-0794, Robert Constanza and Douglas Hinrichs, hinrichs@cbl.cees.edu, <http://kabir.umd.edu/ISEE/ISEEhome.html>

#### MARKET INCENTIVES

- ***Appendix D: Examples of Market-Based Incentives, The Keystone National Policy Dialogue on Ecosystem Management, Final Report*** October 1996, P.O. Box 8606, Keystone, CO, 970-468-5822. Includes description of Assurances, Conservation Banking, Forest Certification, Forest Legacy and Stewardship Programs, Public Benefits

Rating System, Property Tax Stabilization in Growth Areas, Instream Flow Rights, Commercial and Recreational Use of Species, and Effluent Trading in Watersheds, Grass Banking, Air Quality Incentives, Local Wetlands Mitigation Banks, and Individual Transferable Quotas.

- ***Forming a Partnership to Preserve Resources - The Virginia Beach Agricultural Reserve Program*** Mary M. Heinrich, Coordinator Southeastern Association for Virginia's Environment, Virginia Beach, VA, paper delivered at Watershed '96. <http://www.epa.gov/OWOW/watershed/Proceed/heinrich.html> They succeeded in having the City Council adopt an easement program in 55 percent of the upland area of the watershed. Mary Heinrich, SAVE, P.O. Box 6733, Virginia Beach, VA, 23456, 757-460-0750.

#### NATIONAL EFFORTS

- ***Watersheds and Cultural Landscapes: Sustainable Development through Heritage Areas***, A. Elizabeth Watson, Chair, National Coalition for Heritage Areas, Washington, DC, paper delivered at Watershed '96. <http://www.epa.gov/OWOW/watershed/Proceed/watson.html>, Heritage and Conservation Consultant, 5103 Crain Highway, Bowie, MD 20715, 301-262-5064, 301-805-8959 (fax)
- ***Center of Excellence for Sustainable Development Web Site***, Department of Energy, <http://www.sustainable.doe.gov/index.html> Cited by the Planner's Web as a "top sustainability site." The toolkit includes pages that explain what sustainable development is, the role of indicators, and associated publications, software and educational resources. The toolkit's URL is <http://www.sustainable.doe.gov/reflib.html>
- ***Wildlife Habitat Council***, has succeeded in putting on the ground, in partnership with corporations and others, enhancement projects on over 400,000 acres in 41 states. 1010 Wayne Avenue, Suite 920, Silver Spring, MD, 20910, 301-588-8994, 301-588-4629 (fax), [whc@cais.com](mailto:whc@cais.com), <http://www.wildlifehc.org/index.html> Regional offices located in South Carolina, Michigan, and Kentucky. Robert Johnson, Vice President. ***The Cooper River Corridor Project Community-Based Planning Initiative*** is a key example of the power of partnerships to achieve sustainable development within a watershed context.
- ***National Watershed Coalition***, 9150 W. Jewell Avenue, Suite 102, Lakewood, CO, 80232-6469, promotes the use of the watershed concept when dealing with natural resource issues.
- ***Conservation Partnership Forum***, where conservation-oriented agencies, businesses, and organizations meet informally to share information and explore opportunities for more effective public/private conservation partnerships. Contact: Don Wells, National Association of Conservation Districts, 804-746-0148, 804-730-5911 (fax).
- ***Golf and the Environment: Creating a Sustainable Future***, short pamphlet that describes environmental principles for golf courses in the United States, The Center for Resource Management, 1104 East Ashton Avenue, Suite 210, Salt Lake City, Utah, 84106, provides recommendations for environmentally sensitive golf courses. EPA contact: Phil Oshida, 202-260-6045.